

# State of Utah

## DEPARTMENT OF ENVIRONMENTAL QUALITY DIVISION OF AIR QUALITY

Michael O. Leavitt  
Governor  
Dianne R. Nielson, Ph.D.  
Executive Director  
Richard W. Sprott  
Director

150 North 1950 West  
P.O. Box 144820  
Salt Lake City, Utah 84114-4820  
(801) 536-4099 Fax  
(801) 536-4414 T.D.D.  
Web: [www.deq.state.ut.us](http://www.deq.state.ut.us)

### Title V Operating Permit

**PERMIT NUMBER: 4900004001**

**DATE OF PERMIT: December 4, 1997**

Date of Last Revision: March 12, 2002

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This Operating Permit is issued to, and applies to the following:

**Name of Permittee:**

Brigham Young University  
P.O. Box 20100  
Provo, UT 84602

**Permitted Location:**

Main Campus  
B-307 ASB  
Brigham Young University  
Provo, UT 84602

UTM coordinates: 4,455,200 meters Northing, 445,000 meters Easting  
SIC code: 8221

### ABSTRACT

Brigham Young University provides the full range of services normally found at a large university. As such, the following emission types are found on the campus and are covered in this permit: 1) a central heating plant, 2) other small boilers, 3) a dry cleaning facility, 4) a gas station for fleet vehicles, 5) a printing plant, 6) paint spray booths, and 7) miscellaneous small emergency generators. The central heating plant is subject to the NSPS for large boilers found in 40 CFR 60 Subparts Db and Dc. The Dry Cleaner MACT, 40 CFR 63 Subpart M, is applicable to the dry cleaning facility and the Printing MACT, 40 CFR 63 Subpart KK, for area sources, applies to the University Press. Also addressed are some emission activities that have no applicable requirements but are identified for information purposes.

### UTAH AIR QUALITY BOARD

By:

Richard W. Sprott, Executive Secretary

Prepared By:

Dave Hansell

## Operating Permit History

12/4/1997 - Permit issued	Action initiated by an initial operating permit application	
8/26/1998 -Permit modified	Action initiated by a reopening of an operating permit for cause	to update the inventory provision of the permit
3/12/2002 -Permit modified	Action initiated by an administrative amendment (initiated by source)	Add three emergency generators rated at 1,500 kW each.

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**Issued under authority of Utah Code Ann. Section 19-2-104 and 19-2-109.1, and in accordance with Utah Administrative Code R307-415 Operating Permit Requirements.**

All definitions, terms and abbreviations used in this permit conform to those used in Utah Administrative Code R307-101 and R307-415 (Rules), and 40 Code of Federal Regulations (CFR), except as otherwise defined in this permit. Unless noted otherwise, references cited in the permit conditions refer to the Rules.

Where a permit condition in Section I, General Provisions, partially recites or summarizes an applicable rule, the full text of the applicable portion of the rule shall govern interpretations of the requirements of the rule. In the case of a conflict between the Rules and the permit terms and conditions of Section II, Special Provisions, the permit terms and conditions of Section II shall govern except as noted in Provision I.M, Permit Shield.

**Section I: General Provisions**

**I.A. Federal Enforcement.**

All terms and conditions in this permit, including those provisions designed to limit the potential to emit, are enforceable by the EPA and citizens under the Clean Air Act of 1990 (CAA) except those terms and conditions that are specifically designated as "State Requirements". (R307-415-6b)

**I.B. Permitted Activity(ies).**

Except as provided in R307-415-7b(1), the permittee may not operate except in compliance with this permit. (See also Provision I.E, Application Shield)

**I.C. Duty to Comply.**

- I.C.1 The permittee must comply with all conditions of the operating permit. Any permit noncompliance constitutes a violation of the Air Conservation Act and is grounds for any of the following: enforcement action; permit termination; revocation and reissuance; modification; or denial of a permit renewal application. (R307-415-6a(6)(a))
- I.C.2 It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. (R307-415-6a(6)(b))
- I.C.3 The permittee shall furnish to the Executive Secretary, within a reasonable time, any information that the Executive Secretary may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Executive Secretary copies of records required to be kept by this permit or, for information claimed to be confidential, the permittee may furnish such records directly to the EPA along with a claim of confidentiality. (R307-415-6a(6)(e))
- I.C.4 This permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance shall not stay

any permit condition, except as provided under R307-415-7f(1) for minor permit modifications. (R307-415-6a(6)(c))

**I.D. Permit Expiration and Renewal.**

I.D.1 **This permit is issued for a fixed term of five years and expires on December 4, 2002.** (R307-415-6a(2))

I.D.2 Application for renewal of this permit is due by June 4, 2002. An application may be submitted early for any reason. (R307-415-5a(1)(c))

I.D.3 An application for renewal submitted after the due date listed in I.D.2 above shall be accepted for processing, but shall not be considered a timely application and shall not relieve the permittee of any enforcement actions resulting from submitting a late application. (R307-415-5a(5))

I.D.4 Permit expiration terminates the permittee's right to operate unless a timely and complete renewal application is submitted consistent with R307-415-7b (see also Provision I.E, Application Shield) and R307-415-5a(1)(c) (see also Provision I.D.2). (R307-415-7c(2))

**I.E. Application Shield.**

If the permittee submits a timely and complete application for renewal, the permittee's failure to have an operating permit will not be a violation of R307-415, until the Executive Secretary takes final action on the permit renewal application. In such case, the terms and conditions of this permit shall remain in force until permit renewal or denial. This protection shall cease to apply if, subsequent to the completeness determination required pursuant to R307-415-7a(3), and as required by R307-415-5a(2), the applicant fails to submit by the deadline specified in writing by the Executive Secretary any additional information identified as being needed to process the application. (R307-415-7b(2))

**I.F. Severability.**

In the event of a challenge to any portion of this permit, or if any portion of this permit is held invalid, the remaining permit conditions remain valid and in force. (R307-415-6a(5))

**I.G. Permit Fee.**

I.G.1 The permittee shall pay an annual emission fee to the Executive Secretary consistent with R307-415-9. (R307-415-6a(7))

I.G.2 The emission fee shall be due on October 1 of each calendar year or 45 days after the source receives notice of the amount of the fee, whichever is later. (R307-415-9(4)(a))

**I.H. No Property Rights.**

This permit does not convey any property rights of any sort, or any exclusive privilege. (R307-415-6a(6)(d))

**I.I. Revision Exception.**

No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit. (R307-415-6a(8))

**I.J. Inspection and Entry.**

I.J.1 Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Executive Secretary or an authorized representative to perform any of the following:

I.J.1.a Enter upon the permittee's premises where the source is located or emissions related activity is conducted, or where records are kept under the conditions of this permit. (R307-415-6c(2)(a))

I.J.1.b Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit. (R307-415-6c(2)(b))

I.J.1.c Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practice, or operation regulated or required under this permit. (R307-415-6c(2)(c))

I.J.1.d Sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with this permit or applicable requirements. (R307-415-6c(2)(d))

I.J.2 Any claims of confidentiality made on the information obtained during an inspection shall be made pursuant to Utah Code Ann. Section 19-1-306. (R307-415-6c(2)(e))

**I.K. Certification.**

Any application form, report, or compliance certification submitted pursuant to this permit shall contain certification as to its truth, accuracy, and completeness, by a responsible official as defined in R307-415-3. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. (R307-415-5d)

**I.L. Compliance Certification.**

I.L.1 Permittee shall submit to the Executive Secretary an annual compliance certification, certifying compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. This certification shall be submitted no later than September 30, 1998 and that date each year following until this permit expires. The certification shall include all the following (permittee may cross-reference this permit or previous reports): (R307-415-6c(5))

I.L.1.a The identification of each term or condition of this permit that is the basis of the certification;

I.L.1.b The identification of the methods or other means used by the permittee for determining the compliance status with each term and condition during the certification period, and

whether such methods or other means provide continuous or intermittent data. Such methods and other means shall include, at a minimum, the monitoring and related recordkeeping and reporting requirements in this permit. If necessary, the permittee also shall identify any other material information that must be included in the certification to comply with section 113(c)(2) of the Act, which prohibits knowingly making a false certification or omitting material information;

- I.L.1.c The status of compliance with the terms and conditions of the permit for the period covered by the certification, based on the method or means designated in Provision I.L.1.b. The certification shall identify each deviation and take it into account in the compliance certification. The certification shall also identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion or exceedance as defined under 40 CFR Part 64 occurred; and
- I.L.1.d Such other facts as the Executive Secretary may require to determine the compliance status.
- I.L.2 The permittee shall also submit all compliance certifications to the EPA, Region VIII, at the following address or to such other address as may be required by the Executive Secretary: (R307-415-6c(5)(d))

Office of Enforcement, Compliance and Environmental Justice  
(mail code 8ENF)  
EPA, Region VIII  
999 18th Street, Suite 300  
Denver, CO 80202-2466

**I.M. Permit Shield.**

- I.M.1 Compliance with the provisions of this permit shall be deemed compliance with any applicable requirements as of the date of this permit, provided that:
- I.M.1.a Such applicable requirements are included and are specifically identified in this permit, or (R307-415-6f(1)(a))
- I.M.1.b Those requirements not applicable to the source are specifically identified and listed in this permit. (R307-415-6f(1)(b))
- I.M.2 Nothing in this permit shall alter or affect any of the following:
- I.M.2.a The emergency provisions of Utah Code Ann. Section 19-1-202 and Section 19-2-112, and the provisions of the CAA Section 303. (R307-415-6f(3)(a))
- I.M.2.b The liability of the owner or operator of the source for any violation of applicable requirements under Utah Code Ann. Section 19-2-107(2)(g) and Section 19-2-110 prior to or at the time of issuance of this permit. (R307-415-6f(3)(b))
- I.M.2.c The applicable requirements of the Acid Rain Program, consistent with the CAA Section 408(a). (R307-415-6f(3)(c))

I.M.2.d The ability of the Executive Secretary to obtain information from the source under Utah Code Ann. Section 19-2-120, and the ability of the EPA to obtain information from the source under the CAA Section 114. (R307-415-6f(3)(d))

**I.N. Emergency Provision.**

I.N.1 An “emergency” is any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under this permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error. (R307-415-6g(1))

I.N.2 An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the affirmative defense is demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

I.N.2.a An emergency occurred and the permittee can identify the causes of the emergency. (R307-415-6g(3)(a))

I.N.2.b The permitted facility was at the time being properly operated. (R307-415-6g(3)(b))

I.N.2.c During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in this permit. (R307-415-6g(3)(c))

I.N.2.d The permittee submitted notice of the emergency to the Executive Secretary within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken. This notice fulfills the requirement of Provision I.S.2.c below. (R307-415-6g(3)(d))

I.N.3 In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof. (R307-415-6g(4))

I.N.4 This emergency provision is in addition to any emergency or upset provision contained in any other section of this permit. (R307-415-6g(5))

**I.O. Operational Flexibility.**

Operational flexibility is governed by R307-415-7d(1).

**I.P. Off-permit Changes.**

Off-permit changes are governed by R307-415-7d(2).

**I.Q. Administrative Permit Amendments.**

Administrative permit amendments are governed by R307-415-7e.

I.R.        **Permit Modifications.**

Permit modifications are governed by R307-415-7f.

I.S.        **Records and Reporting.**

I.S.1        Records.

I.S.1.a        The records of all required monitoring data and support information shall be retained by the permittee for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records, all original strip-charts or appropriate recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. (R307-415-6a(3)(b)(ii))

I.S.1.b        For all monitoring requirements described in Section II, Special Provisions, the source shall record the following information, where applicable: (R307-415-6a(3)(b)(i))

I.S.1.b.1        The date, place as defined in this permit, and time of sampling or measurement.

I.S.1.b.2        The date analyses were performed.

I.S.1.b.3        The company or entity that performed the analyses.

I.S.1.b.4        The analytical techniques or methods used.

I.S.1.b.5        The results of such analyses.

I.S.1.b.6        The operating conditions as existing at the time of sampling or measurement.

I.S.1.c        Additional record keeping requirements, if any, are described in Section II, Special Provisions.

I.S.2        Reports.

I.S.2.a        Monitoring reports shall be submitted to the Executive Secretary every six months, or more frequently if specified in Section II. All instances of deviation from permit requirements shall be clearly identified in the reports. (R307-415-6a(3)(c)(i))

I.S.2.b        All reports submitted pursuant to Provision I.S.2.a shall be certified by a responsible official in accordance with Provision I.K of this permit. (R307-415-6a(3)(c)(i))

I.S.2.c        The Executive Secretary shall be notified promptly of any deviations from permit requirements including those attributable to upset conditions as defined in this permit, the probable cause of such deviations, and any corrective actions or preventative measures taken. **Prompt, as used in this condition, shall be defined as written notification within 14 days.** Deviations from permit requirements due to unavoidable breakdowns shall be reported in accordance with the provisions of R307-107. (R307-415-6a(3)(c)(ii))

I.S.3 Notification Addresses.

I.S.3.a All reports, notifications, or other submissions required by this permit to be submitted to the Executive Secretary are to be sent to the following address or to such other address as may be required by the Executive Secretary:

Utah Division of Air Quality  
P.O. Box 144820  
Salt Lake City, UT 84114-4820  
Phone: 801-536-4000

I.S.3.b All reports, notifications or other submissions required by this permit to be submitted to the EPA should be sent to one of the following addresses or to such other address as may be required by the Executive Secretary:

For annual compliance certifications

Environmental Protection Agency, Region VIII  
Office of Enforcement, Compliance and  
Environmental Justice (mail code 8ENF)  
999 18th Street, Suite 300  
Denver, CO 80202-2466

For reports, notifications, or other correspondence  
related to permit modifications, applications, etc.

Environmental Protection Agency, Region VIII  
Office of Partnerships & Regulatory Assistance  
Air & Radiation Program (mail code 8P-AR)  
999 18th Street, Suite 300  
Denver, CO 80202-2466  
Phone: 303-312-6440

I.T. **Reopening for Cause.**

I.T.1 A permit shall be reopened and revised under any of the following circumstances:

I.T.1.a New applicable requirements become applicable to the permittee and there is a remaining permit term of three or more years. No such reopening is required if the effective date of the requirement is later than the date on which this permit is due to expire, unless the terms and conditions of this permit have been extended pursuant to R307-415-7c(3), application shield. (R307-415-7g(1)(a))

I.T.1.b The Executive Secretary or EPA determines that this permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of this permit. (R307-415-7g(1)(c))

I.T.1.c EPA or the Executive Secretary determines that this permit must be revised or revoked to assure compliance with applicable requirements. (R307-415-7g(1)(d))

I.T.1.d Additional applicable requirements are to become effective before the renewal date of this permit and are in conflict with existing permit conditions. (R307-415-7g(1)(e))

I.T.2            Proceedings to reopen and issue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. (R307-415-7g(2))

I.U.            **Inventory Requirements.**

I.U.1            An emission inventory shall be submitted in accordance with the procedures of R307-150, Emission Inventories. (R307-150)

I.U.2            A Hazardous Air Pollutant Inventory shall be submitted in accordance with the procedures of R307-155, Hazardous Air Pollutant Inventory. (R307-155)

## **Section II: SPECIAL PROVISIONS**

### **II.A. Emission Unit(s) Permitted to Discharge Air Contaminants.**

(R307-415-4(3)(a) and R307-415-4(4))

- II.A.1      **Central Heating Plant** (designated as Emission unit #7)  
Unit Description: Central Heating Plant with 6 boilers and a baghouse.
- II.A.2      **Central Heating Plant Boiler #1** (designated as Emission unit #1)  
Unit Description: Natural gas boiler with #2 fuel oil backup - 50 MMBTU/hr.
- II.A.3      **Central Heating Plant Boiler #4** (designated as Emission unit #4)  
Unit Description: Natural gas boiler with #2 fuel oil backup - 150 MMBTU/hr.
- II.A.4      **Central Heating Plant Boiler #6** (designated as Emission unit #6)  
Unit Description: Natural gas boiler with #2 fuel oil backup - 150 MMBTU/hr.
- II.A.5      **Central Heating Plant Boiler #2** (designated as Emission unit #2)  
Unit Description: Coal fired boiler - 50 MMBTU/hr.
- II.A.6      **Central Heating Plant Boiler #3** (designated as Emission unit #3)  
Unit Description: Coal fired boiler - 50 MMBTU/hr.
- II.A.7      **Central Heating Plant Boiler #5** (designated as Emission unit #5)  
Unit Description: Coal fired boiler - 100 MMBTU/hr.
- II.A.8      **Central Heating Plant Baghouse** (designated as Emission unit #8)  
Unit Description: Pulse jet baghouse for boiler #2, #3, and #5.
- II.A.9      **Univ Press Bldg Boilers** (designated as Emission unit #9)  
Unit Description: Four (4) natural gas only boilers - 1.0 MMBTU/hr each.
- II.A.10     **Dairy Products Lab Boilers** (designated as Emission unit #10)  
Unit Description: Two (2) natural gas only boilers - 3.3 MMBTU/hr each.
- II.A.11     **Laundry Boilers** (designated as Emission unit #11)  
Unit Description: Two (2) natural gas only boilers - 6.7 MMBTU/hr (North Boiler) and 8.4 MMBTU/hr (South Boiler).
- II.A.12     **ROTC Bldg Boiler** (designated as Emission unit #12)  
Unit Description: Natural gas only boiler - 2.25 MMBTU/hr.
- II.A.13     **Cluff Bldg Boiler** (designated as Emission unit #13)  
Unit Description: Natural gas only boiler - 1.0 MMBTU/hr.
- II.A.14     **Laundry Dry Cleaner** (designated as Emission unit #14)  
Unit Description: Two (2) Bowe dry to dry machines.
- II.A.15     **Brewster Bldg Paint Booth** (designated as Emission unit #15)  
Unit Description: Paint booth with dry filters.
- II.A.16     **Auto Shop Paint Booth** (designated as Emission unit #16)  
Unit Description: Paint booth with dry filters.
- II.A.17     **Aux Maint Bldg Paint Booth** (designated as Emission unit #17)  
Unit Description: Paint booth with dry filters.
- II.A.18     **Univ Press Bldg Print Operations** (designated as Emission unit #18)  
Unit Description: Print operations using inks and solvents.
- II.A.19     **University Service Station** (designated as Emission unit #19)  
Unit Description: Fuel dispensing operations for university fleet vehicles.
- II.A.20     **Miscellaneous Emergency Generators** (designated as Emission unit #20)  
Unit Description: Several emergency generators ranging in size from 15 Kw to 750 Kw and fueled by either natural gas or #2 or lighter fuel oil.
- II.A.21     **Diesel-Fired Emergency Generators** (designated as Emission unit #21)  
Unit Description: Three diesel-fired emergency generators rated at 1,500 kW each.

**II.B. Requirements and limitations.**

The following emission limitations, standards, and operational limitations apply to the permitted facility as indicated: (R307-415-6a(1))

**II.B.1 Conditions on permitted source (Source-wide)**

**II.B.1.a Condition:**

HAP emissions shall be less than 10 tons per 12-month period of each HAP and 25 tons per 12-month period of all HAPs; HAPs shall include materials used for source categories or purposes other than printing and publishing as well as the materials used for printing and publishing. [Authority granted under 40 CFR 63.820(a)(3); condition originated in 40 CFR 63.820 (Subpart KK)]

**II.B.1.a.1 Monitoring:**

Compliance shall be determined by maintaining a record of HAP-containing materials used each month and the HAP content of each. The amount of HAP used shall be determined within the first 10 days of each month for the previous month; this amount shall be added to the previous 11 months to provide the total for the past 12 months.

**II.B.1.a.2 Recordkeeping:**

The records required to be kept shall include the following:

- Name of each HAP containing material (example: type of ink, coating, adhesives, etc)
- HAP content of each material (lb/gal or other appropriate measurement such as wt %)
- Amount of each material used on a monthly basis
- The 12-month total of each HAP and all HAPs

**II.B.1.a.3 Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

**II.B.1.b Condition:**

Records shall be maintained of the material (salt, crushed slag, or sand) applied to the roads. [Authority granted under R307-307; condition originated in R307-307]

**II.B.1.b.1 Monitoring:**

Records required for this permit condition will serve as monitoring.

**II.B.1.b.2 Recordkeeping:**

The following records shall be maintained as outlined in Provision I.S.1 of this permit:

For Salt - the quantity applied, the percent by weight of insoluble solids in the salt, and the percentage of the material that is sodium chloride (NaCl).

For Sand or Crushed Slag - the quantity applied and the percent by weight of fine material which passes the number 200 sieve in a standard gradation analysis. (origin: R307-307)

II.B.1.b.3

**Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.1.c

**Condition:**

The permittee shall comply with the applicable requirements for servicing of motor vehicle air conditioners pursuant to 40 CFR 82, Subpart B - Servicing of Motor Vehicle Air Conditioners. [Authority granted under 40 CFR 82.30(b); condition originated in 40 CFR 82 Subpart B]

II.B.1.c.1

**Monitoring:**

The permittee shall certify, in the annual compliance statement required in Section I of this permit, its compliance status with the requirements of 40 CFR 82, Subpart B.

II.B.1.c.2

**Recordkeeping:**

All records required in 40 CFR 82, Subpart B shall be maintained consistent with the requirements of Provision S.1 in Section I of this permit.

II.B.1.c.3

**Reporting:**

All reports required in 40 CFR 82, Subpart B shall be submitted as required. There are no additional reporting requirements except as outlined in Section I of this permit.

II.B.1.d

**Condition:**

The permittee shall comply with the applicable requirements for recycling and emission reduction for class I and class II refrigerants pursuant to 40 CFR 82, Subpart F - Recycling and Emissions Reduction. [Authority granted under 40 CFR 82.150(b); condition originated in 40 CFR 82 Subpart F]

II.B.1.d.1

**Monitoring:**

The permittee shall certify, in the annual compliance statement required in Section I of this permit, its compliance status with the requirements of 40 CFR 82, Subpart F.

II.B.1.d.2

**Recordkeeping:**

All records required in 40 CFR 82, Subpart F shall be maintained consistent with the requirements of Provision S.1 in Section I of this permit.

II.B.1.d.3

**Reporting:**

All reports required in 40 CFR 82, Subpart F shall be submitted as required. There are no additional reporting requirements except as outlined in Section I of this permit.

II.B.1.e

**Condition:**

Visible emissions shall be no greater than 20 percent opacity except as specified elsewhere in this permit. [Authority granted under R307-201-1; condition originated in this permit]

II.B.1.e.1

**Monitoring:**

No monitoring shall be required except as directed by the Executive Secretary. If directed, monitoring shall be conducted in accordance with 40 CFR 60, Appendix A, Method 9.

II.B.1.e.2

**Recordkeeping:**

Results from opacity observations (EPA Method 9) shall be recorded and maintained in accordance with Provision S.1 in Section I of this permit.

II.B.1.e.3

**Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.2

**Conditions on Central Heating Plant (Emission unit #7)**

II.B.2.a

**Condition:**

Coal consumption shall be no greater than 16,992 tons per 8 month "summer season" (1 Mar to Oct 31). [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-783-91]

II.B.2.a.1

**Monitoring:**

No later than November 15 each year, the following calculation shall be performed to determine the consumption for the season. During the season, each bucket of coal introduced into the boilers shall be weighed and then totaled to determine the amount consumed during the "summer season".

II.B.2.a.2

**Recordkeeping:**

At the end of the "summer season", the following information shall be determined and maintained: The total amount of coal introduced into the boilers during the "summer season" as of the end of the October along with the weight of each bucket introduced during the season.

II.B.2.a.3

**Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.2.b

**Condition:**

Fuel Oil consumption shall be no greater than 90,000 gallons per 4 month "winter season" (November 1 to February 28/29) for maintenance firing. There is no limit if natural gas is curtailed, provided the Executive Secretary is notified within 96 hrs of the curtailment (curtailment means the natural gas provider/supplier imposes a curtailment or interruption of service which is involuntary and beyond the control of the permittee). [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-783-91]

II.B.2.b.1

**Monitoring:**

No later than March 15 each year, the following calculation shall be performed to determine the consumption for the season. The inventory amount at the beginning of the season shall be added to the total of all fuel oil receipts during the season. The inventory balance at the end of the season shall then be subtracted from this sum to determine the amount consumed during the "winter season". Any consumption during periods of curtailment may also be subtracted.

II.B.2.b.2

**Recordkeeping:**

At the end of the "winter season", the following information shall be determined and maintained: 1) Beginning of season inventory of fuel oil, 2) End of season inventory of fuel oil, 3) Amount of fuel oil received during the season (from receipts), 4) Amount of fuel oil consumed (as of the end of the season), 5) Amount of fuel oil consumed during any periods of curtailment to include the periods of the curtailment and the method used to determine consumption.

II.B.2.b.3

**Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.2.c

**Condition:**

Natural Gas consumption shall be no greater than 405 MMSCF per 4 month "winter season" (November 1 to February 28/29). [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-783-91]

II.B.2.c.1

**Monitoring:**

No later than March 15 each year, the amount of natural gas consumed for the season shall be determined from billing records and/or meter readings. (origin: AO # DAQE-783-91)

II.B.2.c.2

**Recordkeeping:**

At the end of the "winter season", the following information shall be determined and maintained: The amount of natural gas consumed for the season from billing records or meter readings as of the end of the "winter season."

II.B.2.c.3

**Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.2.d

**Condition:**

Only #2 fuel oil may be used as a backup fuel in boilers #1, #4, and #6 should the supply of natural gas be curtailed (curtailment means the natural gas provider/supplier imposes a curtailment or interruption of service which is involuntary and beyond the control of the permittee). It shall also be permissible to use the coal fired boilers #2, #3, and #5 during such a curtailment, provided the on-site #2 distillate fuel oil has been depleted and replacement quantity is not available from a contracted supplier. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-783-91]

II.B.2.d.1

**Monitoring:**

The operating log shall be reviewed monthly by a plant supervisor to assure that all required entries have been recorded and all required actions have been taken. The log shall be annotated that the review has occurred.

II.B.2.d.2

**Recordkeeping:**

Consumption data shall be recorded in a log as required elsewhere in this permit. The log shall also indicate any instance where fuel is changed. Any instance where a backup fuel is used in lieu of a primary fuel not being available shall have supporting documentation for the change. All fuel oil delivered shall have

documentation to show that it is #2 fuel oil and all documentation shall be available upon request.

II.B.2.d.3

**Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.2.e

**Condition:**

Only natural gas shall be fired in the Central Heating Plant from November 1 to February 28/29 each season except for provisions for maintenance, curtailments and emergencies as specified elsewhere in this permit. For the period March 1 to October 31 each year, coal may be fired in accordance with this permit. The coal firing equipment at the Central Heating Plant shall be exhausted through an approved fabric filter, particulate control device. Natural gas may be used as an alternate fuel for coal at any time. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-783-91]

II.B.2.e.1

**Monitoring:**

The operating log shall be reviewed monthly by a plant supervisor to assure that all required entries have been recorded and all required actions have been taken. The log shall be annotated that the review has occurred.

II.B.2.e.2

**Recordkeeping:**

The log shall indicate any instance where fuel is changed. Any instance where a backup fuel is used in lieu of a primary fuel not being available shall have supporting documentation for the change. The use (beginning and ending of operation) of the baghouse shall also be indicated in the log.

II.B.2.e.3

**Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.2.f

**Condition:**

The sulfur content of any coal combusted shall be no greater than 0.6 percent by weight. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-783-91]

II.B.2.f.1

**Monitoring:**

The sulfur content shall be determined by ASTM Method D-3177, D-4239 or approved equivalent. A grab sample, from each day of coal burning and representative of the coal actually being fed to the unit, is to be collected, consolidated into a monthly sample and submitted to a laboratory at least monthly for analysis. As an alternative, verification of the sulfur content may be shown by providing copies of vendor certification for each delivery of coal to the source.

II.B.2.f.2

**Recordkeeping:**

Results from laboratory analysis or vendor certifications shall be maintained in accordance with Provision S.1 in Section I of this permit.

II.B.2.f.3

**Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.2.g

**Condition:**

Visible emissions shall be no greater than 10 percent opacity. [Authority granted under Utah SIP Section IX.H.1.a.B; condition originated in DAQE-783-91]

II.B.2.g.1

**Monitoring:**

The permittee shall calibrate, maintain and operate a continuous monitoring system for measuring the opacity of emissions discharged to the atmosphere in accordance with R307-170 and shall record the output of the system. The output shall be reviewed at least monthly for compliance with the opacity limit; compliance is to be based on the percent opacity averaged over six consecutive minutes.

II.B.2.g.2

**Recordkeeping:**

Results of opacity observations shall be recorded and maintained as described in Provision S.1 in Section I of this permit.

II.B.2.g.3

**Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.3

**Conditions on Central Heating Plant Boiler #1 (Emission unit #1)**

II.B.3.a

**Condition:**

Emissions of NO<sub>x</sub> shall be no greater than 9.55 lbs/hour and no greater than 95 ppmdv (using 7% excess oxygen). [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-783-91]

II.B.3.a.1

**Monitoring:**

Stack testing shall be performed as specified here:

(a) Frequency. The source shall be tested at any time if directed by the Executive Secretary.

(b). Notification. At least 30 days before the test, the source shall notify the Executive Secretary of the date, time, and place of testing and provide a copy of the test protocol. The source shall attend a pretest conference if determined necessary by the Executive Secretary.

(c). The emission sample point shall conform to the requirements of 40 CFR 60, Appendix A, Method 1. In addition, Occupational Safety and Health Administration (OSHA) approved access shall be provided to the test location.

(d). Methods to be used:

(1) To test for NO<sub>x</sub> emissions - 40 CFR 60, Appendix A, Method 7, 7A, 7B, 7C, 7D, or 7E.

(2) To determine stack gas velocity and volumetric flow rate - 40 CFR 60, Appendix A, Method 2.

(e). Calculations. To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors determined by the Executive Secretary to give the results in the specified units of the emission limitation. In addition, values shall be corrected to 7% excess oxygen as appropriate.

(f). Production Rate During Testing. The production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years.

II.B.3.a.2

**Recordkeeping:**

Results of all stack testing shall be recorded and maintained in accordance with the associated test method and Provision S.1 in Section I of this permit.

II.B.3.a.3

**Reporting:**

Results of required stack testing shall be submitted to the Executive Secretary within 30 days of completion of the testing. The submittal shall clearly identify results and indicate compliance status. The annual compliance certification required by Provision L in Section I of this permit shall use the most recent test results as a basis for stating compliance status for this limitation.

II.B.4

**Conditions on Central Heating Plant Boiler #4 (Emission unit #4)**

II.B.4.a

**Condition:**

Emissions of NO<sub>x</sub> shall be no greater than 38.5 lbs/hour and no greater than 127 ppmdv (using 7% excess oxygen). [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-783-91]

II.B.4.a.1

**Monitoring:**

Stack testing shall be performed as specified here:

(a) Frequency. The source shall be tested at any time if directed by the Executive Secretary.

(b). Notification. At least 30 days before the test, the source shall notify the Executive Secretary of the date, time, and place of testing and provide a copy of the test protocol. The source shall attend a pretest conference if determined necessary by the Executive Secretary.

(c). The emission sample point shall conform to the requirements of 40 CFR 60, Appendix A, Method 1. In addition, Occupational Safety and Health Administration (OSHA) approved access shall be provided to the test location.

(d). Methods to be used:

(1) To test for NO<sub>x</sub> emissions - 40 CFR 60, Appendix A, Method 7, 7A, 7B, 7C, 7D, or 7E.

(2) To determine stack gas velocity and volumetric flow rate - 40 CFR 60, Appendix A, Method 2.

(e). Calculations. To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors determined by the Executive Secretary to give the results in the specified units of the emission limitation. In addition, values shall be corrected to 7% excess oxygen as appropriate.

(f). Production Rate During Testing. The production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years.

II.B.4.a.2

**Recordkeeping:**

Results of all stack testing shall be recorded and maintained in accordance with the associated test method and Provision S.1 in Section I of this permit.

II.B.4.a.3

**Reporting:**

Results of required stack testing shall be submitted to the Executive Secretary within 30 days of completion of the testing. The submittal shall clearly identify results and indicate compliance status. The annual compliance certification required by Provision L in Section I of this permit shall use the most recent test results as a basis for stating compliance status for this limitation.

II.B.5

**Conditions on Central Heating Plant Boiler #6 (Emission unit #6)**

II.B.5.a

**Condition:**

Emissions of NO<sub>x</sub> shall be no greater than 38.5 lbs/hour and no greater than 127 ppm<sub>dv</sub> (using 7% excess oxygen). [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-783-91]

II.B.5.a.1

**Monitoring:**

Stack testing shall be performed as specified here:

(a) Frequency. The source shall be tested at any time if directed by the Executive Secretary.

(b). Notification. At least 30 days before the test, the source shall notify the Executive Secretary of the date, time, and place of testing and provide a copy of the test protocol. The source shall attend a pretest conference if determined necessary by the Executive Secretary.

(c). The emission sample point shall conform to the requirements of 40 CFR 60, Appendix A, Method 1. In addition, Occupational Safety and Health Administration (OSHA) approved access shall be provided to the test location.

(d). Methods to be used:

(1) To test for NO<sub>x</sub> emissions - 40 CFR 60, Appendix A, Method 7, 7A, 7B, 7C, 7D, or 7E.

(2) To determine stack gas velocity and volumetric flow rate - 40 CFR 60, Appendix A, Method 2.

(e). Calculations. To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors determined by the Executive Secretary to give the results in the specified units of the emission limitation. In addition, values shall be corrected to 7% excess oxygen as appropriate.

(f). Production Rate During Testing. The production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years.

II.B.5.a.2

**Recordkeeping:**

Results of all stack testing shall be recorded and maintained in accordance with the associated test method and Provision S.1 in Section I of this permit.

II.B.5.a.3

**Reporting:**

Results of required stack testing shall be submitted to the Executive Secretary within 30 days of completion of the testing. The submittal shall clearly identify results and indicate compliance status. The annual compliance certification required by Provision L in Section I of this permit shall use the most recent test results as a basis for stating compliance status for this limitation.

II.B.6

**Conditions on Central Heating Plant Boiler #2 (Emission unit #2)**

II.B.6.a

**Condition:**

Emissions of NO<sub>x</sub> shall be no greater than 37.4 lbs/hour or 331 ppm<sub>dv</sub> (using 7% excess oxygen). [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-783-91]

II.B.6.a.1

**Monitoring:**

Stack testing shall be performed as specified here:

(a) Frequency. The source shall be tested at any time if directed by the Executive Secretary.

(b). Notification. At least 30 days before the test, the source shall notify the Executive Secretary of the date, time, and place of testing and provide a copy of the test protocol. The source shall attend a pretest conference if determined necessary by the Executive Secretary.

(c). The emission sample point shall conform to the requirements of 40 CFR 60, Appendix A, Method 1. In addition, Occupational Safety and Health Administration (OSHA) approved access shall be provided to the test location.

(d). Methods to be used:

(1) To test for NO<sub>x</sub> emissions - 40 CFR 60, Appendix A, Method 7, 7A, 7B, 7C, 7D, or 7E.

(2) To determine stack gas velocity and volumetric flow rate - 40 CFR 60, Appendix A, Method 2.

(e). Calculations. To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors determined by the Executive Secretary to give the results in the specified units of the emission limitation. In addition, values shall be corrected to 7% excess oxygen as appropriate.

(f). Production Rate During Testing. The production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years.

II.B.6.a.2

**Recordkeeping:**

Results of all stack testing shall be recorded and maintained in accordance with the associated test method and Provision S.1 in Section I of this permit.

II.B.6.a.3

**Reporting:**

Results of required stack testing shall be submitted to the Executive Secretary within 30 days of completion of the testing. The submittal shall clearly identify results and indicate compliance status. The annual compliance certification required by Provision L in Section I of this permit shall use the most recent test results as a basis for stating compliance status for this limitation.

II.B.6.b

**Condition:**

Emissions of SO<sub>2</sub> shall be no greater than 62.5 lbs/hour and no greater than 408 ppm<sub>dv</sub> (using 7% excess oxygen). [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-783-91]

II.B.6.b.1

**Monitoring:**

Stack testing shall be performed as specified here:

(a) Frequency. The source shall be tested at any time if directed by the Executive Secretary.

(b). Notification. At least 30 days before the test, the source shall notify the Executive Secretary of the date, time, and place of testing and provide a copy of the test protocol. The source shall attend a pretest conference if determined necessary by the Executive Secretary.

(c). The emission sample point shall conform to the requirements of 40 CFR 60, Appendix A, Method 1. In addition, Occupational Safety and Health Administration (OSHA) approved access shall be provided to the test location.

(d). Methods to be used:

(1) To test for SO<sub>2</sub> emissions - 40 CFR 60, Appendix A, Method 6, 6A, 6B, or 6C.

(2) To determine stack gas velocity and volumetric flow rate - 40 CFR 60, Appendix A, Method 2.

(e). Calculations. To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors determined by the Executive Secretary to give the results in the specified units of the emission limitation. In addition, values must be corrected to 7% excess oxygen as appropriate.

(f). Production Rate During Testing. The production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years.

II.B.6.b.2

**Recordkeeping:**

Results of all stack testing shall be recorded and maintained in accordance with the associated test method and Provision S.1 in Section I of this permit.

II.B.6.b.3

**Reporting:**

Results of required stack testing shall be submitted to the Executive Secretary within 30 days of completion of the testing. The submittal shall clearly identify results and indicate compliance status. The annual compliance certification required by Provision L in Section I of this permit shall use the most recent test results as a basis for stating compliance status for this limitation.

II.B.7

**Conditions on Central Heating Plant Boiler #3 (Emission unit #3)**

II.B.7.a

**Condition:**

Emissions of NO<sub>x</sub> shall be no greater than 37.4 lbs/hour or 331 ppm<sub>dv</sub> (using 7% excess oxygen). [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-783-91]

II.B.7.a.1

**Monitoring:**

Stack testing shall be performed as specified here:

(a) Frequency. The source shall be tested at any time if directed by the Executive Secretary.

(b). Notification. At least 30 days before the test, the source shall notify the Executive Secretary of the date, time, and place of testing and provide a copy of the test protocol. The source shall attend a pretest conference if determined necessary by the Executive Secretary.

(c). The emission sample point shall conform to the requirements of 40 CFR 60, Appendix A, Method 1. In addition, Occupational Safety and Health Administration (OSHA) approved access shall be provided to the test location.

(d). Methods to be used:

(1) To test for NO<sub>x</sub> emissions - 40 CFR 60, Appendix A, Method 7, 7A, 7B, 7C, 7D, or 7E.

(2) To determine stack gas velocity and volumetric flow rate - 40 CFR 60, Appendix A, Method 2.

(e). Calculations. To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors determined by the Executive Secretary to give the results in the specified units of the emission limitation. In addition, values shall be corrected to 7% excess oxygen as appropriate.

(f). Production Rate During Testing. The production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years.

II.B.7.a.2

**Recordkeeping:**

Results of all stack testing shall be recorded and maintained in accordance with the associated test method and Provision S.1 in Section I of this permit.

II.B.7.a.3

**Reporting:**

Results of required stack testing shall be submitted to the Executive Secretary within 30 days of completion of the testing. The submittal shall clearly identify results and indicate compliance status. The annual compliance certification required by Provision L in Section I of this permit shall use the most recent test results as a basis for stating compliance status for this limitation.

II.B.7.b

**Condition:**

Emissions of SO<sub>2</sub> shall be no greater than 62.5 lbs/hour or 408 ppmdv (using 7% excess oxygen). [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-783-91]

II.B.7.b.1

**Monitoring:**

Stack testing shall be performed as specified here:

(a) Frequency. The source shall be tested at any time if directed by the Executive Secretary.

(b). Notification. At least 30 days before the test, the source shall notify the Executive Secretary of the date, time, and place of testing and provide a copy of the test protocol. The source shall attend a pretest conference if determined necessary by the Executive Secretary.

(c). The emission sample point shall conform to the requirements of 40 CFR 60, Appendix A, Method 1. In addition, Occupational Safety and Health Administration (OSHA) approved access shall be provided to the test location.

(d). Methods to be used:

(1) To test for SO<sub>2</sub> emissions - 40 CFR 60, Appendix A, Method 6, 6A, 6B, or 6C.

(2) To determine stack gas velocity and volumetric flow rate - 40 CFR 60, Appendix A, Method 2.

(e). Calculations. To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors determined by the Executive Secretary to give the results in the specified units of the emission limitation. In addition, values must be corrected to 7% excess oxygen as appropriate.

(f). Production Rate During Testing. The production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years.

II.B.7.b.2

**Recordkeeping:**

Results of all stack testing shall be recorded and maintained in accordance with the associated test method and Provision S.1 in Section I of this permit.

II.B.7.b.3

**Reporting:**

Results of required stack testing shall be submitted to the Executive Secretary within 30 days of completion of the testing. The submittal shall clearly identify results and indicate compliance status. The annual compliance certification required by Provision L in Section I of this permit shall use the most recent test results as a basis for stating compliance status for this limitation.

II.B.8

**Conditions on Central Heating Plant Boiler #5 (Emission unit #5)**

II.B.8.a

**Condition:**

Emissions of NO<sub>x</sub> shall be no greater than 74.8 lbs/hour or 331 ppm<sub>dv</sub> (using 7% excess oxygen). [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-783-91]

II.B.8.a.1

**Monitoring:**

Stack testing shall be performed as specified here:

(a) Frequency. The source shall be tested at any time if directed by the Executive Secretary.

(b). Notification. At least 30 days before the test, the source shall notify the Executive Secretary of the date, time, and place of testing and provide a copy of the test protocol. The source shall attend a pretest conference if determined necessary by the Executive Secretary.

(c). The emission sample point shall conform to the requirements of 40 CFR 60, Appendix A, Method 1. In addition, Occupational Safety and Health Administration (OSHA) approved access shall be provided to the test location.

(d). Methods to be used:

(1) To test for NO<sub>x</sub> emissions - 40 CFR 60, Appendix A, Method 7, 7A, 7B, 7C, 7D, or 7E.

(2) To determine stack gas velocity and volumetric flow rate - 40 CFR 60, Appendix A, Method 2.

(e). Calculations. To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors determined by the Executive Secretary to give the results in the specified units of the emission limitation. In addition, values shall be corrected to 7% excess oxygen as appropriate.

(f). Production Rate During Testing. The production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years.

II.B.8.a.2

**Recordkeeping:**

Results of all stack testing shall be recorded and maintained in accordance with the associated test method and Provision S.1 in Section I of this permit.

II.B.8.a.3

**Reporting:**

Results of required stack testing shall be submitted to the Executive Secretary within 30 days of completion of the testing. The submittal shall clearly identify results and indicate compliance status. The annual compliance certification required by Provision L in Section I of this permit shall use the most recent test results as a basis for stating compliance status for this limitation.

II.B.8.b

**Condition:**

Emissions of SO<sub>2</sub> shall be no greater than 125 lbs/hour or 408 ppm<sub>dv</sub> (using 7% excess oxygen). [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-783-91]

II.B.8.b.1

**Monitoring:**

Stack testing shall be performed as specified here:

(a) Frequency. The source shall be tested at any time if directed by the Executive Secretary.

(b). Notification. At least 30 days before the test, the source shall notify the Executive Secretary of the date, time, and place of testing and provide a copy of the test protocol. The source shall attend a pretest conference if determined necessary by the Executive Secretary.

(c). The emission sample point shall conform to the requirements of 40 CFR 60, Appendix A, Method 1. In addition, Occupational Safety and Health Administration (OSHA) approved access shall be provided to the test location.

(d). Methods to be used:

(1) To test for SO<sub>2</sub> emissions - 40 CFR 60, Appendix A, Method 6, 6A, 6B, or 6C.

(2) To determine stack gas velocity and volumetric flow rate - 40 CFR 60, Appendix A, Method 2.

(e). Calculations. To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors determined by the Executive Secretary to give the results in the specified units of the emission limitation. In addition, values must be corrected to 7% excess oxygen as appropriate.

(f). Production Rate During Testing. The production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years.

II.B.8.b.2

**Recordkeeping:**

Results of all stack testing shall be recorded and maintained in accordance with the associated test method and Provision S.1 in Section I of this permit.

II.B.8.b.3

**Reporting:**

Results of required stack testing shall be submitted to the Executive Secretary within 30 days of completion of the testing. The submittal shall clearly identify results and indicate compliance status. The annual compliance certification required by Provision L in Section I of this permit shall use the most recent test results as a basis for stating compliance status for this limitation.

II.B.9

**Conditions on Central Heating Plant Baghouse (Emission unit #8)**

II.B.9.a

**Condition:**

Emissions of PM<sub>10</sub> shall be no greater than 1.83 lbs/hour or 0.010 grains/dscf (using 68 degrees F & 29.92 in. Hg). [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-783-91]

II.B.9.a.1

**Monitoring:**

Stack testing shall be performed as specified below:

(a) Frequency. Emissions shall be tested every three years, based on the date of the most recent stack test. The source may also be tested at any time if directed by the Executive Secretary.

(b) Notification. At least 30 days before the test, the source shall notify the Executive Secretary of the date, time, and place of testing and provide a copy of the test protocol. The source shall attend a pretest conference if determined necessary by the Executive Secretary.

(c) Methods.

(1) Sample Location - the emission point shall conform to the requirements of 40 CFR 60, Appendix A, Method 1, and Occupational Safety and Health Administration (OSHA) approved access shall be provided to the test location.

(2) For stacks in which no liquid drops are present, the following methods shall be used: 40 CFR 51, Appendix M, Methods 201 or 201a. Method 202 may be used to measure condensible particulate matter.

(3) For stacks in which liquid drops are present, methods to eliminate the liquid drops should be explored. If no reasonable method to eliminate the drops exists, then the following methods shall be used: 40 CFR 60, Appendix A, Method 5, 5a, 5d, or 5e as appropriate. The back half condensibles shall also be tested using a method specified by the Executive Secretary. All particulate captured shall be considered  $PM_{10}$ .

(4) The back half condensibles shall not be used for compliance demonstration but shall be used for inventory purposes.

(d) Calculations. To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors determined by the Executive Secretary to give the results in the specified units of the emission limitation.

(e) Production Rate During Testing. The production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years.

II.B.9.a.2

**Recordkeeping:**

Results of all stack testing shall be recorded and maintained in accordance with the associated test method and Provision S.1 in Section I of this permit.

II.B.9.a.3

**Reporting:**

Results of required stack testing shall be submitted to the Executive Secretary within 30 days of completion of the testing. The submittal shall clearly identify results and indicate compliance status. The annual compliance certification required by Provision L in Section I of this permit shall use the most recent test results as a basis for stating compliance status for this limitation.

II.B.10

**Conditions on Laundry Dry Cleaner (Emission unit #14)**

II.B.10.a

**Condition:**

Consumption of perchloroethylene shall be no greater than 2,100 gal/12 month rolling total. [Authority granted under 40 CFR 63.320(h); condition originated in 40 CFR 63 Subpart M]

II.B.10.a.1

**Monitoring:**

The following calculation shall be performed within the first ten (10) days of every month using data as of the end of the previous month:

Sum the volume of all perchloroethylene purchases made in the previous 12 months. If no perchloroethylene purchases were made in a given month, then the consumption for that month is zero gallons. The total sum calculated is the yearly perchloroethylene consumption at the facility. (origin: 40 CFR 63.323(d))

II.B.10.a.2

**Recordkeeping:**

Receipts of perchloroethylene purchases shall be filed in a central location. In addition, the following minimum information shall be recorded monthly in an operating log:

- The volume of perchloroethylene purchased each month, determined from the receipts of perchloroethylene purchases.
- The calculation and result of the yearly perchloroethylene consumption, determined as specified elsewhere in this permit. (origin: 40 CFR 63.324(d)(1))

II.B.10.a.3

**Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.10.b

**Condition:**

Each refrigerator condenser shall be operated with a diverter valve which prevents air drawn into the dry cleaning machine when the door of the machine is open from passing through the refrigerated condenser. [Authority granted under 40 CFR 63.322(e)(3); condition originated in 40 CFR 63 Subpart M]

II.B.10.b.1

**Monitoring:**

The diverter valve of each dry cleaning system shall be inspected weekly for perceptible leaks while the dry cleaning system is operating.

Perceptible leaks are those perchloroethylene vapor or liquid leaks that are obvious from 1) the odor of perchloroethylene; 2) visual observation, such as pools or droplets of liquid; or 3) the detection of gas flow by passing the fingers over the surface of equipment.

All leaks detected shall be repaired within 24 hours. If repair parts must be ordered, either a written or verbal order for those parts shall be initiated within 2 working days of detecting the leak. Such repair parts shall be installed within 5 working days after receipt. (origin: 40 CFR 63.322(k))

II.B.10.b.2

**Recordkeeping:**

The following information shall be recorded in the operating log:

- The dates when dry cleaning system components are inspected for perceptible leaks and the name or location where leaks are detected.
- The dates of repair and records of written or verbal orders for repair parts. (origin: 40 CFR 63.324(d)(4))

II.B.10.b.3

**Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.10.c

**Condition:**

The door of each dry cleaning machine shall be closed immediately after transferring articles to or from the machine and shall be kept closed at all other times. In addition,

employees shall be oriented and informed of proper practices (to include keeping door closed) when hired and an entry in the operating log shall be made that this orientation has occurred. [Authority granted under 40 CFR 63.322(c); condition originated in 40 CFR 63 Subpart M]

II.B.10.c.1

**Monitoring:**

Supervisors shall be constantly alert for instances when the door of the dry cleaning machine is left open. In addition, log entries shall be reviewed monthly to assure the required orientations are being provided.

II.B.10.c.2

**Recordkeeping:**

An operating log shall be maintained at the dry cleaning facility and sufficient information recorded as required, clearly indicating the date, time and results of any readings, calculations, maintenance or other actions taken.

II.B.10.c.3

**Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.10.d

**Condition:**

Each refrigerated condenser shall be operated to not vent or release the air-perchloroethylene gas-vapor stream contained within the dry cleaning machine to the atmosphere while the dry cleaning machine drum is rotating. [Authority granted under 40 CFR 63.322(e)(1); condition originated in 40 CFR 63 Subpart M]

II.B.10.d.1

**Monitoring:**

The following components of each dry cleaning system shall be inspected weekly for perceptible leaks, while the dry cleaning system is operating:

- Hose and pipe connections, fittings, couplings and valves
- Door gaskets and seatings
- Filter gaskets and seatings
- Pumps
- Solvent tanks and containers
- Water separators
- Muck cookers
- Stills
- Exhaust dampers
- Diverter valves
- Cartridge filter housings

Perceptible leaks are those perchloroethylene vapor or liquid leaks that are obvious from 1) the odor of perchloroethylene; 2) visual observation, such as pools or droplets of liquid; or 3) the detection of gas flow by passing the fingers over the surface of equipment.

All leaks detected shall be repaired within 24 hours. If repair parts must be ordered, either a written or verbal order for those parts shall be initiated within 2 working days of detecting the leak. Such repair parts shall be installed within 5 working days after receipt. (origin: 40 CFR 322(k) Subpart M)

II.B.10.d.2

**Recordkeeping:**

The following information shall be recorded in the operating log:

- The dates when dry cleaning system components are inspected for perceptible leaks and the name or location where leaks are detected.
- The dates of repair and records of written or verbal orders for repair parts. (origin: 40 CFR 63.324(d)(4))

II.B.10.d.3

**Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.10.e

**Condition:**

Each dry cleaning system shall be operated and maintained according to the manufacturers' specifications and recommendations. A copy of the design specifications and the operating manuals for each dry cleaning system and each emission control device located at the dry cleaning facility shall be retained onsite. [Authority granted under 40 CFR 63.322(d); condition originated in Dry Cleaning MACT]

II.B.10.e.1

**Monitoring:**

A supervisor shall note the availability of system design specifications and operating manuals semi-annually at the time of the semi-annual monitoring report required by provision S.2 in Section I of this permit.

II.B.10.e.2

**Recordkeeping:**

An operating log shall be maintained at the dry cleaning facility and sufficient information recorded as required, clearly indicating the date, time and results of any readings, calculations, maintenance or other actions taken.

II.B.10.e.3

**Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.10.f

**Condition:**

All perchloroethylene and wastes that contain perchloroethylene shall be stored in solvent tanks or solvent containers with no perceptible leaks. [Authority granted under 40 CFR 63.322(j); condition originated in 40 CFR 63 Subpart M]

II.B.10.f.1

**Monitoring:**

All perchloroethylene solvent tanks and containers shall be inspected weekly for perceptible leaks.

Perceptible leaks are those perchloroethylene vapor or liquid leaks that are obvious from 1) the odor of perchloroethylene; 2) visual observation, such as pools or droplets of liquid; or 3) the detection of gas flow by passing the fingers over the surface of equipment.

All leaks detected shall be repaired within 24 hours. If repair parts must be ordered, either a written or verbal order for those parts shall be initiated within 2

working days of detecting the leak. Such repair parts shall be installed within 5 working days after receipt. (origin: 40 CFR 63.322(k), (m), and 63.321)

II.B.10.f.2

**Recordkeeping:**

The following information shall be recorded in the operating log:

- The dates when dry cleaning system components are inspected for perceptible leaks and the name or location where leaks are detected.

- The dates of repair and records of written or verbal orders for repair parts. (origin: 40 CFR 63.324(d)(4))

II.B.10.f.3

**Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.10.g

**Condition:**

The air-perchloroethylene gas-vapor stream contained in each dry cleaning machine shall be routed through a refrigerated condenser or an equivalent device (equivalency to be requested by the permittee and submitted to the Executive Secretary for a determination). [Authority granted under 40 CFR 63.322(b)(1); condition originated in 40 CFR 63 Subpart M]

II.B.10.g.1

**Monitoring:**

The temperature of the air-perchloroethylene gas-vapor stream on the outlet side of the refrigerated condenser shall be measured weekly with a temperature sensor to determine if it is equal to or less than 7.2 degrees C (45 degrees F). The temperature sensor shall be used according to the manufacturer's instructions and shall be designed to measure a temperature of 7.2 degrees C (45 degrees F) to an accuracy of 1.1 degrees C ( 2 degrees F).

If the outlet stream temperature exceeds the value indicated, adjustments or repairs shall be made to the dry cleaning system or control device to meet those values. If repair parts must be ordered, either a written or verbal order for those parts shall be initiated within 2 working days of detecting such exceedance. Such repair parts shall be installed within 5 working days after receipt. (origin: 40 CFR 63.323(a))

II.B.10.g.2

**Recordkeeping:**

The results of the temperature readings shall be recorded in an operating log on the date the readings are taken. In addition, the dates of repair and records of written or verbal orders for repair parts shall be maintained in the same operating log. (origin: 40 CFR 63.324(d)(5))

II.B.10.g.3

**Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.11      **Conditions on Brewster Bldg Paint Booth (Emission unit #15)**

II.B.11.a      **Condition:**

All air exiting the paint booth shall pass through paint arrestor particulate filters before being vented to the atmosphere. [Authority granted under R307-401-6(1) [BACT]; condition originated in this permit]

II.B.11.a.1      **Monitoring:**

Visual inspections of paint booth filter type, installation, and condition shall be made weekly by a shift supervisor to determine compliance with this permit condition.

II.B.11.a.2      **Recordkeeping:**

An operators log shall be maintained which shall include the results of the monitoring required.

II.B.11.a.3      **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.12      **Conditions on Auto Shop Paint Booth (Emission unit #16)**

II.B.12.a      **Condition:**

All air exiting the paint booth shall pass through paint arrestor particulate filters before being vented to the atmosphere. [Authority granted under R307-401-6(1) [BACT]; condition originated in this permit]

II.B.12.a.1      **Monitoring:**

Visual inspections of paint booth filter type, installation, and condition shall be made weekly by a shift supervisor to determine compliance with this permit condition.

II.B.12.a.2      **Recordkeeping:**

An operators log shall be maintained which shall include the results of the monitoring required.

II.B.12.a.3      **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.13      **Conditions on Aux Maint Bldg Paint Booth (Emission unit #17)**

II.B.13.a      **Condition:**

All air exiting the paint booth shall pass through paint arrestor particulate filters before being vented to the atmosphere. [Authority granted under R307-401-6(1) [BACT]; condition originated in this permit]

II.B.13.a.1      **Monitoring:**

Visual inspections of paint booth filter type, installation, and condition shall be made weekly by a shift supervisor to determine compliance with this permit condition.

II.B.13.a.2

**Recordkeeping:**

An operators log shall be maintained which shall include the results of the monitoring required.

II.B.13.a.3

**Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.14

**Conditions on University Service Station (Emission unit #19)**

II.B.14.a

**Condition:**

During the period Nov 1 through Feb 28/29 each year, all gasoline dispensed, sold or stored for use, must contain at least 2.0% oxygen by weight. [Authority granted under R307-301-11; condition originated in R307-301-11]

II.B.14.a.1

**Monitoring:**

The required records shall be reviewed to determine compliance with this condition.

II.B.14.a.2

**Recordkeeping:**

During the control period (Nov 1 through Feb 28/29), the following records must be maintained: the names, addresses and Control Area Responsible Party (CAR) or Blender CAR, carrier, distributor, or reseller ID number of the parties from whom all shipments of gasoline are purchased or received, the dates when they are received and, for each shipment bought, sold or transported, the transfer document and a copy of the contract for the delivery. In addition, the following data shall also be recorded: the volume of the shipment, type of oxygenate, percent of oxygenate by volume and purity (if available), and the oxygen content by weight percent. (origin: R307-301-8)

II.B.14.a.3

**Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.14.b

**Condition:**

The fuel dispensing system shall be labeled with the appropriate notice as required in R307-301-12 during the period of Nov 1 through Feb 28/29. [Authority granted under R307-301-12; condition originated in R307-301-12]

II.B.14.b.1

**Monitoring:**

Within seven (7) calendar days of Nov 1 each year, and at least once each Dec, Jan, and Feb, the pumps shall be inspected for the appropriate labels.

II.B.14.b.2

**Recordkeeping:**

A record of required inspections shall be maintained in accordance with Provision S.1 in Section I of this permit.

II.B.14.b.3

**Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.15                    **Conditions on Miscellaneous Emergency Generators (Emission unit #20)**

II.B.15.a                    **Condition:**

Hours of operation shall be less than 500 hours per 12 month period for each generator and shall be limited to burning #2 fuel oil or natural gas. [Authority granted under R307-401-6(1) [BACT]; condition originated in this permit]

II.B.15.a.1                    **Monitoring:**

Within 10 days of the end of each month, and as of the last day of the previous month, a new 12-month total of hours operated shall be calculated using the previous 12 months data for each unit. In addition, the fuel type shall be reviewed for compliance.

II.B.15.a.2                    **Recordkeeping:**

Records shall be kept indicating the results of the rolling 12 month total for each unit. The monthly total as well as the rolling 12 month total shall be clearly indicated. Also, the fuel type used in the unit shall be recorded along with the monthly totals.

II.B.15.a.3                    **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.16                    **Conditions on Diesel-Fired Emergency Generators (Emission unit #21)**

II.B.16.a                    **Condition:**

If a continuous program of construction, installation, modification, relocation or establishment is not proceeding eighteen months after the issuance date of the subject approval order, the Executive Secretary may revoke the subject approval order. [Authority granted under R307-401-11; condition originated in DAQE-179-02]

II.B.16.a.1                    **Monitoring:**

Records required for this permit condition will serve as monitoring.

II.B.16.a.2                    **Recordkeeping:**

As applicable, the permittee shall maintain a copy of each notification required by this permit condition in accordance with Provision I.S.1 of this permit.

II.B.16.a.3                    **Reporting:**

In addition to the reporting requirements specified in Section I of this permit, the permittee shall notify the Executive Secretary in writing eighteen months after the issuance date of the subject approval order if construction, installation, modification, relocation or establishment is not complete. The notification shall document the status of construction, installation, modification, relocation or establishment and provide a schedule for installation, modification, relocation or establishment. The permittee shall also notify the Executive Secretary in writing when the affected process unit is operational.

II.B.16.b

**Condition:**

Visible emissions shall be no greater than 20 percent opacity except for operation not exceeding 3 minutes in any hour. [Authority granted under R307-201-1(4); condition originated in DAQE-179-02]

II.B.16.b.1

**Monitoring:**

If an affected emission unit is operated during a quarter, an opacity observation of the emission unit shall be performed in the quarter that the emission unit was operated. The opacity observation can be conducted at anytime during the quarter. The opacity observation shall be conducted by an individual trained on the observation procedures of 40 CFR 60, Appendix A, Method 9, while the emission unit is operating. If visible emissions other than condensed water vapor are observed from the emission unit, an opacity determination of that emission unit shall be performed by a certified observer within 24 hours of the initial visual emission observation. The opacity determination shall be performed in accordance with 40 CFR 60, Appendix A, Method 9.

II.B.16.b.2

**Recordkeeping:**

Results of monitoring shall be maintained as described in Provision I.S.1 of this permit.

II.B.16.b.3

**Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.16.c

**Condition:**

Hours of operation shall be no greater than 350 hrs per 12 month rolling period for each unit. The units shall be used for electricity producing only during the periods when electric power from the utilities is interrupted or during maintenance. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-179-02]

II.B.16.c.1

**Monitoring:**

By the 15th day of each month, the permittee shall calculate the total hours of operation in the previous 12 months for each affected emission unit. Hours of operation for each affected emission unit shall be determined by an hour meter and/or a log.

II.B.16.c.2

**Recordkeeping:**

For each affected emission unit, the permittee shall record the following information for each usage: date(s), total hours used, and reason for usage. These records and the results of monitoring shall be maintained as described in Provision I.S.1 of this permit.

II.B.16.c.3

**Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.16.d

**Condition:**

Sulfur content of any fuel oil burned shall be no greater than 0.5 percent by weight. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-179-02]

II.B.16.d.1

**Monitoring:**

For each delivery of oil, the permittee shall either:

(1) Determine the fuel sulfur content expressed as wt% in accordance with the methods of the American Society for Testing Materials (ASTM);

(2) Inspect the fuel sulfur content expressed as wt% determined by the vendor using methods of the ASTM; or

(3) Inspect documentation provided by the vendor that indirectly demonstrates compliance with this provision.

II.B.16.d.2

**Recordkeeping:**

Results of monitoring shall be maintained as described in Provision I.S.1 of this permit.

II.B.16.d.3

**Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.16.e

**Condition:**

At all times, including periods of startup, shutdown, and malfunction, the permittee shall, to the extent practicable, maintain and operate any affected emission units, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Executive Secretary which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. [Authority granted under R307-401-5; condition originated in DAQE-179-02]

II.B.16.e.1

**Monitoring:**

Records required for this permit condition will serve as monitoring.

II.B.16.e.2

**Recordkeeping:**

Permittee shall document activities performed to assure proper operation and maintenance. Records shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.16.e.3

**Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.C. **Emissions Trading.**

(R307-415-6a(10))

Not applicable to this source.

**II.D. Alternative Operating Scenarios.**

(R307-415-6a(9))

Not applicable to this source.

**Section III: PERMIT SHIELD**

A permit shield was not granted for any specific requirements.

**Section IV: ACID RAIN PROVISIONS.**

This source is not subject to Title IV. This section is not applicable.

## REVIEWER COMMENTS

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This operating permit incorporates all applicable requirements contained in the following documents:

DAQE-179-02	dated	March 07, 2002
DAQE-783-91	dated	October 18, 1991

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**1. Comment on an item originating in 40 CFR 60, Subpart Db & Dc regarding Central Heating Plant (Unit 7)**

Applicability of NSPS to boilers: Boilers # 2, 3, and 5 are coal fired and pre-NSPS (Db and/or Dc). However, boilers # 1, 4, and 6 were new in 1992, burn natural gas and became subject to the NSPS (Db for # 4 and #6 and Dc for # 1). Subpart A also applies. [Comment last updated on 3/10/1998]

**2. Comment on an item originating in DAQE-783-91 regarding Central Heating Plant (Unit 7)**

Elimination of input heat capacity limits for coal, fuel oil and natural gas: It was determined that the "input heat capacity" limits for coal, fuel oil and natural gas, found in the approval order (DAQE-783-91), were in fact redundant and less stringent than the limits on the fuel consumption.

For example, the limit on natural gas consumption in the approval order was 405 MMSCF per 4 month "winter season". With a heat value of 1,050 BTU/SCF (from AP-42, APP A) the following results:

$$(405 \text{ MMSCF}/2880 \text{ Hrs}) \times (1050 \text{ BTU}/\text{SCF}) \times (10^6 \text{ SCF}/\text{MMSCF}) \times (\text{MMBTU}/10^6 \text{ BTU}) = 147.66 \text{ MMBTU}/\text{Hr}$$

Since 147.66 MMBTU/Hr can not be exceeded without exceeding 405 MMSCF of natural gas, the input heat capacity limit of 256 MMBTU/hr serves no purpose. The same analysis holds for fuel oil and coal also. [Comment last updated on 3/10/1998]

**3. Comment on an item originating in DAQE-783-91 regarding Central Heating Plant (Unit 7)**

Elimination of output heat capacity limits for coal, fuel oil and natural gas: It was determined that the "output heat capacity" limits for coal, fuel oil and natural gas, found in the approval order (DAQE-783-91), were in fact redundant and less stringent than the limits on the fuel consumption. Since the amount of fuel consumed is limited to amounts that result in input heat values well below the limits found in the approval order, and since output heat values are a function of input and efficiency (rules of equilibrium apply), the output limits can not be exceeded (they exceed the maximum possible input values). [Comment last updated on 3/10/1998]

**4. Comment on an item originating in DAQE-783-91 regarding Central Heating Plant (Unit 7)**

Elimination of redundant sulfur content limits: The approval order (DAQE-783-91) had two sulfur limits for the coal. After reviewing and analyzing these two limits, it was found that the source could not exceed one without exceeding the other and that

one was in fact more stringent than the other. As a result, the less stringent limit has been eliminated. The analysis follows:

Use the limits from the approval order of 0.54 lb-sulfur/MMBTU and 0.60% sulfur by weight.

Use a heat value of 12,300 BTU/lb-coal (from AP-42, APP A)

$(12,300 \text{ BTU/lb-coal}) \times (0.54 \text{ lb-sulfur/MMBTU}) = 0.007 \text{ lb-sulfur/lb-coal}$  or 0.7% by weight which exceeds the 0.6% limit. Thus this is not as stringent.

$(0.006 \text{ lb-sulfur/lb-coal}) / 12,300 \text{ BTU/lb-coal} = 0.488 \text{ lb-sulfur/MMBTU}$  which is below the limit of 0.54 lb-sulfur/MMBTU, thus making this the more stringent limit. [Comment last updated on 3/10/1998]

**5. Comment on an item originating in DAQE-783-91 regarding Central Heating Plant (Unit 7)**

Elimination of fuel oil sulfur content limitation: The approval order (DAQE-783-91) had two limitations for the sulfur content of fuel oil burned in the central heating plant. In addition, there was a requirement that only #2 distillate fuel be used, and in addition, it can only be used as a backup fuel for maintenance firing and natural gas curtailment. Per AP-42, Section 1.3.1, distillate oils contain less than 0.3% sulfur by weight. This is well below the approval order limit of 0.64% and equates to 0.154 lb-sulfur/MMBTU, well below the 0.30 lb-S/MMBTU limit of the approval order and the 0.8 or 0.5 lb-S/MMBTU limits in the NSPS (40 CFR 60.42b and 60.42c respectively). As a result, the two limits on the sulfur content for fuel oil have been eliminated. [Comment last updated on 3/10/1998]

**6. Comment on an item originating in DAQE-783-91 regarding Central Heating Plant (Unit 7)**

Elimination of advance notification requirement for natural gas curtailment: The AO (DAQE-783-91) allowed fuel oil to be consumed with no limits in the event of a natural gas curtailment, but only with advance notice to the Executive Secretary for an assessment of the environmental impact. This requirement was not included in the OP for the following reasons:

1) The "assessment of environmental impact" is not defined, nor are the DAQ or source actions after the assessment outlined anywhere. After the "assessment", the source would be allowed to use fuel oil, regardless of what the undefined "assessment" determined.

2) In the event of a natural gas curtailment, there isn't time to allow any review to occur; boilers must continue to operate to provide necessary heat & steam for the physical plant. [Comment last updated on 3/10/1998]

**7. Comment on an item originating in 40 CFR 60 Subpart Dc regarding Central Heating Plant Boiler #1 (Unit 1)**

Semi-Annual Report and Daily Fuel Consumption: The NSPS (40 CFR 60 Subpart Dc) that applies to Boiler #1 requires that a semi-annual report be submitted of the information required to certify that the fuel oil meets the sulfur content limits. As the permit already requires all fuel oil deliveries to be recorded and have certification that it is #2 fuel oil, and since any deviation must be promptly reported, the requirement to report semi-annually is redundant. In addition, the fuel oil is a secondary fuel, burned

only when natural gas is unavailable. Therefore, the requirement to report semi-annually is not included in the permit.

The NSPS also requires a daily record of the fuel consumption be kept. Since there is a seasonal limit on the amount of fuel oil that can be burned and no daily limits on either fuel oil or natural gas consumed, and the emissions required to be controlled are in fact controlled and monitored in some manner, this requirement is of inconsequential environmental impact and not included in the permit. [Comment last updated on 3/10/1998]

**8. Comment on an item originating in 40 CFR 60, Subpart Db regarding Central Heating Plant (Unit 7)**

NO<sub>x</sub> limit redundant and not included: [NOTE: This comment applies to boilers #4 and #6]

The NO<sub>x</sub> limit established for boilers #4 and #6 in 40 CFR 60, Subpart Db is 0.2 lb/MMBTU heat input (see 40 CFR 60.44b(a)(1)). This is equivalent to the 38.5 lb/hr limit established in the permit.

$$[(150 \text{ MMBTU/hr}) / (.78)] \times (0.20 \text{ lb/MMBTU}) = 38.5 \text{ lb/hr}$$

where (.78) is the boiler efficiency.

Therefore it is redundant to include both limits in the permit and the 0.20 lb/MMBTU is not included. [Comment last updated on 3/10/1998]

**9. Comment on an item originating in 40 CFR 60, Subpart Db regarding Central Heating Plant (Unit 7)**

NSPS Sulfur Monitoring Requirements: The NSPS (Subpart Db) allows the source to demonstrate compliance with the sulfur limits of the NSPS by providing a certification from the fuel oil supplier if "very low sulfur" fuel is used. As discussed in another comment, the limits in this permit are well below the NSPS limits; in addition, the requirement to burn only #2 fuel oil essentially assures that the sulfur content of the fuel oil does in fact meet the definition of "very low sulfur" found in the NSPS. Therefore, as long as the source meets the #2 fuel oil requirement, no further monitoring is deemed necessary. [Comment last updated on 3/10/1998]

**10. Comment on an item originating in DAQE-783-91 regarding Central Heating Plant Boiler #1 (Unit 1)**

Frequency of Stack Testing - Boiler #1: The AO required that boiler #1 be stack tested "as directed by the Executive Secretary". However, R307-165 requires emission testing at least once every five years. In the case of Boiler #1, there are no NO<sub>x</sub> limits established by the NSPS (40 CFR 60, Subpart Dc), the NSPS sulfur limit can be controlled by limiting the sulfur content of the fuel (see 40 CFR 60.42c(d)), and the NSPS particulate limit is an opacity of < 20%. The NO<sub>x</sub> limit in the permit was established based on a BACT analysis and a test as directed frequency was established in the Approval Order. Using emission factors from AP-42 results in an emission rate well below the limit of 9.55 lb/hr (using Table 1.4-1, AP-42 and the low NO<sub>x</sub> burner rate of 83 lb/MMSCF). Granted this particular factor has a "D" rating, but the uncontrolled factor (which has a "A" rating) of 140 lb/MMSCF also results in an emission rate less than the limit. This particular boiler does have the low NO<sub>x</sub> burner technology and actual stack test results were only 7.6% of the limit. Based on this

information, the possibility of exceeding the limit is quite remote. It therefore seems of little value to require an extensive stack test every five years which has not been required in the past (see AO DAQE #783-91) nor is it required in the federal standard. However, the possibility exists that at some point in the future a stack test may be necessary for some reason, and so the AO requirement to "test as directed" is included in the OP. [Comment last updated on 3/10/1998]

**11. Comment on an item originating in DAQE-783-91 regarding Central Heating Plant (Unit 7)**

Frequency of Stack Testing - Sulfur on Boilers #2, #3, and #5: The AO required that boilers #2, #3, and #5 be stack tested "as directed by the Executive Secretary". However, R307-165 requires emission testing at least once every five years. In the cases of these boilers, the limits were set mathematically using conservative numbers. Using current AP-42 emission factors (Table 1.1-1 and Appendix A) max emissions for these boilers would be as follows:

$$\text{Emissions} = ((50 \text{ MMBTU/hr}) / (0.78) \times (10^6 \text{ BTU/MMBTU}) \times (\text{lb-coal}/13000 \text{ BTU}) \times ((38 \times 0.6) / \text{ton-coal}) \times (\text{ton-coal}/2000 \text{ lb-coal}))$$

(where 38 is the emission factor from AP-42 and 0.6 is the weight percent of Sulfur)

which equals 56.21 lb-S/hr. This is below the permit limit of 62.5 lb-S/hr. Since the sulfur emissions are controlled by limiting the sulfur content in the coal and the current PTE is below the permit limit, the "test as directed" frequency is appropriate and is continued into the operating permit from the approval order. [Comment last updated on 3/10/1998]

**12. Comment on an item originating in 40 CFR 60, Subpart Db regarding Central Heating Plant (Unit 7)**

Stack Test Frequency for NSPS Boilers: The NSPS for boilers #4 and #6 requires the source to determine compliance with the NO<sub>x</sub> limit upon request (40 CFR 60.46b(e)(4)) through the means of a 30 day performance test. Utah rules require a stack test at a minimum of every 5 years (UAC R307-165). Using emission factors from AP-42 results in an emission rate less than half of the limit of 38.5 lb/hr (using Table 1.4-1, AP-42 and the low NO<sub>x</sub> burner rate of 79 lb/MMSCF). Granted this particular factor has a "D" rating, but the uncontrolled factor (which has a "A" rating), although resulting in a rate greater than the limit of the permit, is, as stated, "uncontrolled". These particular boilers do have the low NO<sub>x</sub> burner technology and actual stack test results were only 20% and 25% of the limit respectively. Based on this information, the possibility of exceeding the limit is quite remote. It therefore seems of little value to require an extensive stack test every five years which has not been required in the past (see AO DAQE #783-91) nor is it required in the federal standard. However, the possibility exists that at some point in the future a stack test may be necessary for some reason, and so the AO requirement to "test as directed" is included in the OP. [Comment last updated on 3/10/1998]

**13. Comment on an item originating in R307-401-6(1) regarding Laundry Boilers (Unit 11)**

BACT for Boilers: The two boilers in the laundry, which are identified in Section II.A.11, have been reviewed for BACT and it was determined that BACT is the requirement to burn only natural gas. This is identified in the emissions unit description in Section II.A.11 of the operating permit.

Additional note: There are other misc boilers located throughout the campus, to include but not limited to the ROTC Bldg, the University Press Bldg, the Dairy Products Bldg, and the Cluff Bldg, but in every case except the laundry, these boilers are less than 5 MMBTU/hour and are fueled by natural gas, which exempts them from the requirement for an Approval Order and BACT as described in R307-413-4. [Comment last updated on 3/10/1998]

**14. Comment on an item originating in R307-401-6(1) regarding Miscellaneous Emergency Generators (Unit 20)**

BACT for Emergency Generators: BYU only uses generators for life safety/emergency purposes and as required by the Uniform Building Code for certain types and classes of buildings. They do not use the generators for base load or demand peak shave. Therefore, BACT for these units is determined to be as outlined in this permit, i.e., they can only operate on #2 fuel oil or natural gas and each unit is limited to less than 500 hrs per year of operation for maintenance and emergency use (see EPA memorandum dated Sep 6, 1995 on the subject of "Calculating Potential to Emit (PTE) for Emergency Generators). [Comment last updated on 3/10/1998]

**15. Comment on an item originating in R307-401-6(1) regarding Brewster Bldg Paint Booth (Unit 15)**

BACT for Paintbooths: This comment is applicable to the Brewster Bldg paint booth, the Auto Shop paint booth and the Aux Maint Bldg paint booth. Because these paint booths have not previously been subject to an Approval Order, they were reviewed for BACT. It was determined that BACT is the requirement that the booths be equipped with paint arrestor particulate filters through which all air exiting the booth must pass. [Comment last updated on 3/10/1998]

**16. Comment on an item originating in this permit regarding permitted source (Source-wide)**

Paint Booth Operations: Besides the three main paint booths on campus, there are a few other miscellaneous small paint rooms located throughout the buildings on campus (such as the art bldg, the engineer bldg, etc) where students build and paint scale models, stage props, and similar items. It is estimated that in a worst case scenario (i.e. all paint used has a max VOC content and the small booths each consume 500 gallons - most use less than 50 gallons), total VOC emissions from all painting operations would be approx 42 lbs per year. Therefore, these small booths are considered environmentally insignificant and have no applicable requirements.

The small paint booths are located in the following buildings:

M.L. Bean Museum, Room 175

Museum of Art, Room 240

Harris Fine Arts Center, Room B-425

Fletcher Building, Room 220-D

B-34, Room 250-C

Brimhall Building, Room 168

Brimhall Building, Room 350

Snell Building, Room 290-D

McKay Building, Room 10-B [Comment last updated on 3/10/1998]

**17. Comment on an item originating in R307-201-1 regarding permitted source (Source-wide)**

No monitoring required for site-wide opacity limit: Other than the central heating plant, which has a 10% opacity limit, the other emission units consist of natural gas boilers, paint booths, printing operations, dry cleaning units, a gas station and

emergency generators. These units typically have no visible emissions and thus there is no benefit to having a monitoring requirement. [Comment last updated on 3/10/1998]

**18. Comment on an item originating in R307-307 regarding permitted source (Source-wide)**

Salting and Sanding Requirements: R307-307 requires that any person who applies salt, crushed slag or sand to roads in Utah County shall maintain records of material applied as outlined in the permit. It also requires the salt to be at least 92% sodium chloride (NaCl) unless they vacuum sweep every arterial roadway within three days of the end of the storm. Since BYU does not salt or sand any roadways that meet the definition of arterial as shown on the Provo-Orem Urbanized Area map specified in the rule, they are not subject to the 92% limit and are only required to keep the records required by the rule. [Comment last updated on 3/10/1998]

**19. Comment on an item originating in 40 CFR 63, Subpart KK, Printing MACT regarding permitted source (Source-wide)**

HAP Limits: The Printing MACT, 40 CFR 63.820, applies to this source due to 63.820(a)(2) for "area sources". This limits HAP emissions to 10 tpy for an individual HAP and 25 tpy for any combination of HAPs to include, "... materials used for source categories or purposes other than printing and publishing." Thus the limit on HAP emissions in this permit is for the entire source. [Comment last updated on 3/10/1998]

**20. Comment on an item originating in 40 CFR 63, Subpart M regarding Laundry Dry Cleaner (Unit 14)**

Dry Cleaner MACT: The major source threshold for drycleaners is 2100 gallons of perchloroethylene per rolling 12 month period. Brigham Young University has used far less than that amount over the past 5 years (max 12 month total is 260 gallons). A major source is required to comply with certain requirements, among which is the requirement that the gas stream pass through a carbon filter. However, since BYU is not a major source dry cleaner, they are not required to have a carbon filter and that requirement is not written into this permit. Additionally, they are limited in this permit to stay below the 2100 gallon threshold. Although not required to comply with the the carbon filter requirement, BYU does, in fact, have a carbon filter which is used to filter the gas stream. This extra level of control, as mentioned, is not required and was installed voluntarily by BYU. [Comment last updated on 3/10/1998]

**21. Comment on an item originating in 40 CFR 63.322(i) regarding Laundry Dry Cleaner (Unit 14)**

No cartridge filters on Bowe dry-to-dry machines: The requirements of the Dry Cleaner MACT (40 CFR 63 Subpart M) to drain all cartridge filters in their housing does not apply to the Bowe dry cleaning machines present at BYU as these machines have no cartridge filters. [Comment last updated on 3/10/1998]

**22. Comment on an item originating in 40 CFR 63.323(d) regarding Laundry Dry Cleaner (Unit 14)**

Date of calculation: The Dry Cleaner MACT (40 CFR 63 Subpart M) requires that yearly consumption of perchloroethylene be calculated on the first day of the month (see 40 CFR 63.323(d)). This is impractical for this source as they may not be operating on the literal first day of the month (i.e., a Sunday or holiday). For this permit this has been changed to be required within the first 10 days of the month. [Comment last updated on 3/10/1998]

